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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,110	09/26/2003	Max Christian Schuermann	GK-OEH -171 / 500814.2007	7732
7590	11/02/2005		EXAMINER GABOR, OTILIA	
Gerald H. Kiel, Esq. REED SMITH LLP 599 Lexington Avenue New York, NY 10022-7650			ART UNIT 2884	

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/672,110

Applicant(s)

SCHUERMANN ET AL.

Examiner

Otilia Gabor

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendment***

1. The amendment filed 09/14/2005 has been entered.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1- 3, 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hallmeyer et al. (U. S. Patent 6,504,608) and further in view of Loicht et al. (US 2004/0017567 A1).

Hallmeyer discloses an arrangement for determining the spectral reflectivity of a measurement object (P), the arrangement comprising: a radiation source (1) for irradiating the measurement object (P); a spectrograph (9) for spectral radiation

detection; where the radiation source emits a measurement beam (7) and a reference beam (8) which are directed simultaneously to spectrally dispersing areas of a dispersing element present in the spectrograph (9) and to different receiver areas of a receiver (CCD matrix) in the spectrograph (9) (see Col.9, lines 45-65, Col.10, lines 1-19, whereby it states that the measurement beam and the reference beam are simultaneously directed into the same spectrograph and are by known methods spectrally dispersed onto different receiving elements of the CCD integrated into the spectrograph).

Hallmeyer uses a beam splitter to split the emitted beam (5) from the source into the measurement and the reference beams, and thus fails to use a single source that has different beam areas, which can serve as the measurement and the reference beams. Loicht et al. discloses an arrangement for spectral measurement of a measurement object whereby a single source (3) is used from which two separate beam areas are delineated which serve as the measurement and the reference beams respectively (see Fig.3), where the measurement beam hits the measurement object (10) and the reference beam enters the spectrograph (2) directly. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the light source of Loicht in the arrangement of Hallmeyer, since, as shown by Loicht, separation of the measurement beam from the reference beam using a beam splitter is bulky and mechanically sensitive (see page 1, paragraph 0008), and therefore disadvantageous. Also, as shown by Loicht, having a source where the measurement and reference beams are separated at the surface of the source, allows the source to

be positioned closer to the measurement object and allows for a light to travel undisturbed and thus with the highest possible intensity to the spectrograph.

Regarding claim 2 Hallmeyer discloses (see Fig.1) that the measurement beam (7) and the reference beam (8) travel in parallel beam paths after the measurement beam is reflected at the surface of the object (P).

Regarding claim 3 Hallmeyer and Loicht disclose that the source has known emission characteristics in the different beam areas.

Regarding claims 9 and 10 Hallmeyer fails to specifically disclose that the different spectrally dispersing areas and the different receiver areas are provided either as two adjacent areas on the dispersing element and receiver or as two different adjacent dispersive elements and receivers. However, since Hallmeyer allows for any conventionally available spectral separation and detection configuration, it would have been obvious to one having ordinary skill in the art to use either of the claimed configurations since, they are both conventionally used in the art and since choosing equivalents is within the ordinary skill of one in the art.

5. Claims 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hallmeyer and Loicht and further in view of Dinsmore et al. (U. S. Patent 5,442,678) and Benz et al. (U. S. Patent 5,577,093).

Hallmeyer and Loicht fail to specify the characteristics of the light source used as claimed, however it would have been obvious to one having ordinary skill in the art to use the light source of Dinsmore in the Hallmeyer arrangement, for it offers an X-ray source with superior beam deflection possibility whereby beams can be deflected in

different directions to cover different areas. The X-ray tube of Dinsmore has isotropic emission characteristics. For a superior X-ray tube performance, one of ordinary skill in the art at the time the invention was made would have been motivated to use the X-ray tube arrangement with the rotating target disk as the anode and with a tapered front as disclosed by Benz et al., for such an arrangement reduces the typical problems that are present in the conventional X-ray tubes.

### ***Response to Arguments***

6. Applicant's arguments filed 09/14/2005 have been fully considered but they are not persuasive. The main argument presented by the Applicant is that the reference Hallmeyer fails to disclose that the reflectance is measured as a function of the angle of incidence, however this argument is not persuasive because as clearly disclosed by Hallmeyer, in order to determine the object's reflectance, the radiation is incident on the measurement object at different angles (see Figs.1-4) wherefrom the reflected radiation is then detected (see for example the detail in Fig.2 where it is clearly shown that the measurement radiation 7 is incident on the measurement location M at an angle). Additionally, the recitation that "the arrangement is for determining the spectral reflectivity of a measurement object as a function of angle of incidence" has not been given patentable weight because it has been held that a preamble is denied the effect of limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for

completeness upon the introductory clause (*Kropa v. Robie*, 88 USPQ 478 (CCPA 1951)).

### ***Conclusion***

**7. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

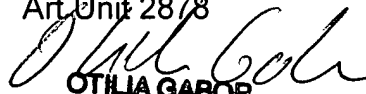
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Otilia Gabor whose telephone number is 571-272-2435. The examiner can normally be reached on Monday, Thursday-Friday between 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2878

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Otilia Gabor  
Primary Examiner  
Art Unit 2878



**OTILIA GABOR**  
**PRIMARY EXAMINER**